SmartSwitch 9000
9H423-26
Local Management Appendix

9032227-01

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Appendix

9H423-26 Module Specific Information

Introduction

This appendix contains local management information that is specific to the 9H423-26 Fast Ethernet Switch Module.

The 9H423-26 Switch Module has 26 ports:

- 24 ports (two fixed RJ21 connectors)
- 2 ports (two fixed MMF SC connectors)

This module can operate in either full duplex or half duplex mode. Auto-negotiation provides support for 10 Mbps and 100 Mbps speeds at both half and full duplex. 100Base-FX supports 100 Mbps speed at both half and full duplex.

Auto-negotiation allows the module to automatically use the fastest rate supported by the device at the other end (either 10 Mbps or 100 Mbps at either half or full duplex). This technology is similar to how modems negotiate transmission speed to find the highest transmission rate. Similarly, auto-negotiation determines the highest common speed between two devices and communicates at that speed. If no common speed is detected, the device will be partitioned.

Modifying Fields and User Privileges

To modify fields on this module, you must have read-write or super-user privileges. If you have read-only privileges, you can view information; however, you cannot modify any fields. For more information about user privileges and community names, see the *SmartSwitch 9000 Module Local Management User's Guide*.

Module Interfaces

The 9H423-26 Fast Ethernet Switch Module has 31 interfaces. Table 1 lists the identifying number, name, and description of each interface.

Table 1. 9H423-26 Module Interfaces

Interface Number	Interface Name	Interface Description
1	SMB1	1 Mbps System Management Bus
2	SMB10	10 Mbps System Management Bus
3	HOST	
4	LOCAL	
5	INB	Internal Network Bus
6	FENET1	Fast Ethernet Front Panel Port 1
7	FENET2	Fast Ethernet Front Panel Port 2
8	FENET3	Fast Ethernet Front Panel Port 3
9	FENET4	Fast Ethernet Front Panel Port 4
10	FENET5	Fast Ethernet Front Panel Port 5
11	FENET6	Fast Ethernet Front Panel Port 6
12	FENET7	Fast Ethernet Front Panel Port 7
13	FENET8	Fast Ethernet Front Panel Port 8
14	FENET9	Fast Ethernet Front Panel Port 9
15	FENET10	Fast Ethernet Front Panel Port 10
16	FENET11	Fast Ethernet Front Panel Port 11
17	FENET12	Fast Ethernet Front Panel Port 12
18	FENET13	Fast Ethernet Front Panel Port 13
19	FENET14	Fast Ethernet Front Panel Port 14
20	FENET15	Fast Ethernet Front Panel Port 15
21	FENET16	Fast Ethernet Front Panel Port 16
22	FENET17	Fast Ethernet Front Panel Port 17
23	FENET18	Fast Ethernet Front Panel Port 18

Table 1. 9H423-26 Module Interfaces (Continued)

Interface Number	Interface Name	Interface Description
24	FENET19	Fast Ethernet Front Panel Port 19
25	FENET20	Fast Ethernet Front Panel Port 20
26	FENET21	Fast Ethernet Front Panel Port 21
27	FENET22	Fast Ethernet Front Panel Port 22
28	FENET23	Fast Ethernet Front Panel Port 23
29	FENET24	Fast Ethernet Front Panel Port 24
30	FENET25	Fast Ethernet Front Panel Port 25 (Fiber)
31	FENET26	Fast Ethernet Front Panel Port 26 (Fiber)

Use the numbers listed in Table 1 to configure the module's default interface (see the General Configuration Screen).

Port Configuration Screen

The 9H423-26 Port Configuration Screen (Figure 1), displays configuration information about each port on the module (one port at a time).

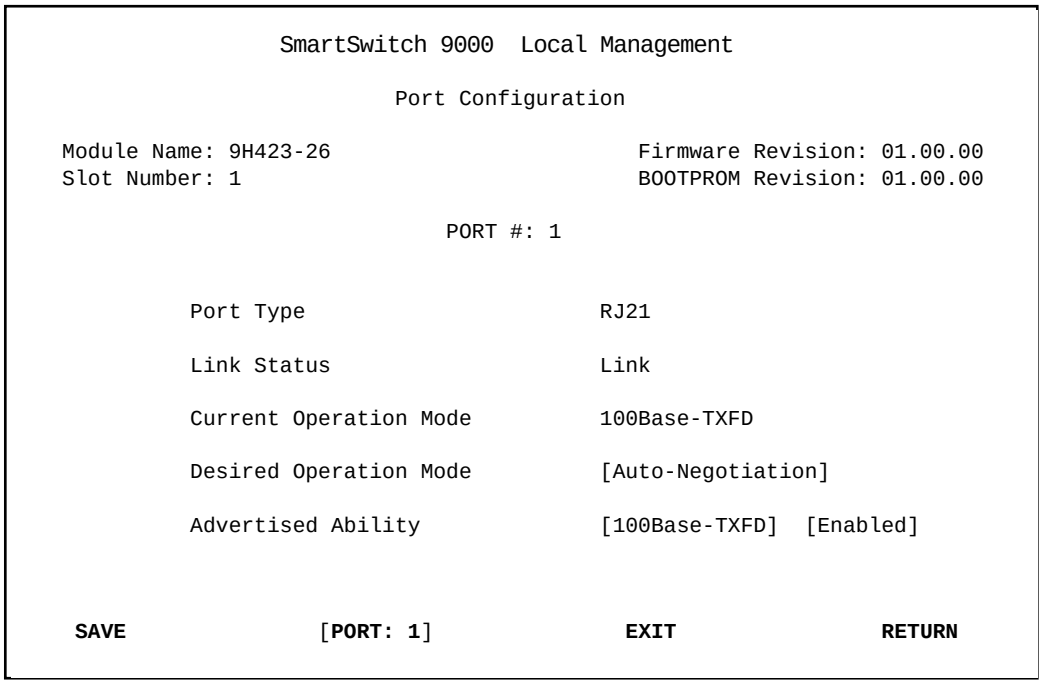

Figure 1. 9H423-26 Port Configuration Screen

Port Configuration Screen Fields

The following information briefly explains each Port Configuration Screen field.

Slot # (Modifiable)
Indicates the slot that the board occupies in the chassis.

Port # (Read-only)
Indicates the current port for which statistics are displayed.

Port Type (Read-only)
Displays one of the following values:

- MMF SC
- RJ21

Link Status (Read-only)
Displays one of the following values:

- Link
- No Link
- N/A

Current Operation Mode (Read-only)
Displays one of the following values:

- 10Base-T
  Operating standard 10 Mbps Ethernet over two pairs of UTP cable.
- 10Base-TFD
  Operating Full Duplex 10 Mbps Ethernet over two pairs of UTP cable. Full Duplex indicates the module is connected to a single device, and is not listening for other transmissions or collisions when sending data. This allows both devices on the link to send and receive data simultaneously over the link. Theoretically, this provides the devices with twice the bandwidth of normal, or half duplex, Ethernet.
- 100Base-TX
  Operating Fast Ethernet over two pairs of Category 5 UTP or Type 1 STP cable.
- 100Base-TXFD
  Operating Full Duplex 100 Mbps Fast Ethernet over two pairs of Category 5 UTP or Type 1 STP cable.
- 100Base-FX
  Operating 100 Mbps Fast Ethernet over two strands of multimode fiber cable.
- 100Base-FXFD

Operating Full Duplex 100 Mbps Fast Ethernet over two strands of multimode fiber cable.

Desired Operation Mode (Toggle)
Displays one of the following values:

- Auto-Negotiation
- 10Base-T manual
- 10Base-TFD manual
- 100Base-TX manual
- 100Base-TXFD manual
- 100Base-FX manual
- 100Base-FXFD manual

Only the modes that the device is capable of using are displayed. The module defaults to auto-negotiation. If the device connected to the module also supports auto-negotiation, the devices self-configure to the fastest possible speed and duplex. For example, if the other device does not support auto-negotiation, the devices do a parallel detection and configure to either 10 Mbps or 100 Mbps, but only at half duplex. If the device connected to the module is standard Ethernet with no auto-negotiation support, and is configured for full duplex, the Desired Operation Mode field must be set to 10Base-T Full Duplex.

Advertised Ability (2 Toggles)
Allows the user to specify the advertised ability for the chosen port. The ability of each port is presented first, followed by the ability to enable/disable on each port. Advertised Ability is applicable only when the Desired Operation Mode field is set to Auto-Negotiation. Otherwise this field displays N/A and is read-only. When in auto-negotiation mode, the module auto-negotiates to the highest speed being advertised by both devices.

Port # (Modifiable)
Displays the current port for which configuration information is displayed. Use the procedure in the next section to display configuration information for a different port.

Displaying Configuration Information for a Different Port

To display configuration information for a different port:

1. Use the arrow keys to highlight the **Port #** field at the bottom of the Port Configuration Screen.
2. Press the **Space Bar** to increment (or press the **Delete** key to decrement) the port number.
3. Press the **Return** key (neither the read-only **Port #** field nor the configuration information will change until you press the **Return** key).

Exiting the Port Configuration Screen

To exit the Port Configuration Screen, use the arrow keys to highlight **RETURN**, then press the Return key.

Port Statistics Screen

The 9H423-26 Port Statistics Screen (Figure 2), displays statistical information for each port (one port at a time).

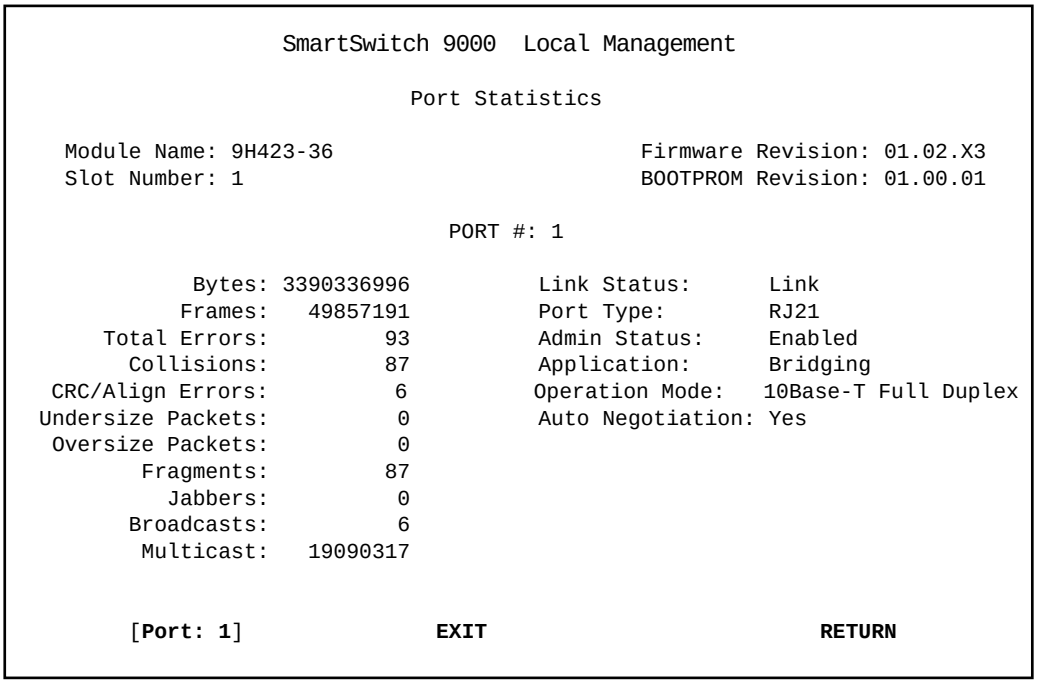

Figure 2. 9H423-26 Port Statistics Screen

Port Statistics Screen Fields

The following information briefly explains each Port Statistics Screen field.

Port # (Read-only)
Indicates the current port for which statistics are displayed.

Bytes (Read-only)
Displays the number of bytes transmitted and received.

Frames (Read-only)
Displays the number of frames transmitted and received.

Total Errors (Read-only)
Displays the total number of errors on this port.

Collisions (Read-only)
Displays the total number of collisions detected on this port.

CRC/Align Errors (Read-only)
Displays the number of bad FCS (Frame Check Sequence) packets with integral number of octets that have been received from the network. Alignment errors are due to a bad FCS with a non-integral number of octets.

Undersize Packets (Read-only)
Displays the number of packets received whose size was less than the minimum Ethernet frame size of 64 bytes, not including preamble.

Oversize Packets (Read-only)
Displays the number of packets received whose size exceeded 1518 data bytes, not including preamble.

Fragments (Read-only)
Displays the total number of packets received that were not an integral number of octets in length or that had a bad Frame Check Sequence (FCS), and were less than 64 octets in length (excluding framing bits, but including FCS octets).

Broadcasts (Read-only)
Displays the number of broadcasts transmitted and received.

Multicast (Read-only)
Displays the number of multicasts transmitted and received.

Link Status (Read-only)
Displays one of the following values:

- Link
- No Link
- N/A

Port Type (Read-only)
Displays one of the following values:

- MMF SC
- RJ21

Admin Status (Read-only)
Indicates the status of the selected port. Possible values are **Enabled** and **Disabled**.

Application (Read-only)
Displays Bridging, indicating that the port is operating as a bridge with a high-speed backbone connection. Switching (SFS) may also be displayed indicating that the port is operating as a switch.

Operation Mode (Read-only)
Displays one of the following values:

- Auto-Negotiation
- 10Base-T
- 10Base-T Full Duplex
- 100Base-TX
- 100Base-TX Full Duplex
- 100Base-FX
- 100Base-FX Full Duplex

Auto-Negotiation (Read-only)
Indicates if the port is in auto-negotiation mode. Possible values are **Yes** and **No**.

Port # (Modifiable)
Displays the current port for which statistics are displayed. Use the procedure in the next section to display statistics for a different port.

Displaying Statistics for a Different Port

To display statistics for a different port:

1. Use the arrow keys to highlight the **Port #** field at the bottom of the Port Statistics Screen.
2. Press the **Space Bar** to increment (or press the **Delete** key to decrement) the port number.
3. Press the **Return** key (neither the read-only **Port #** field, nor the statistics will change until you press the **Return** key).

Exiting the Port Statistics Screen

To exit the Port Statistics screen, use the arrow keys to highlight **RETURN**, then press the Return key.